



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,364	11/14/2006	Gerhard Schmaus	49998	4679
1609 7590 08/27/2010 ROYLANCE, ABRAMS, BERDO & GOODMAN, L.L.P. 1300 19TH STREET, N.W. SUITE 600 WASHINGTON,, DC 20036				
EXAMINER				
HOLT, ANDRIAE M				
ART UNIT		PAPER NUMBER		
1616				
MAIL DATE		DELIVERY MODE		
08/27/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/558,364

Applicant(s)

SCHMAUS ET AL.

Examiner

Andria M. Holt

Art Unit

1616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 11/29/2005; 6/17/2009

DETAILED ACTION

Claims 1-6 are pending in the application.

Election/Restrictions

Applicant's election with traverse of group I, claims 1-2 and 6, in the reply filed on June 11, 2010 is acknowledged. The traversal is on the ground(s) that Applicants' claims fulfill the requirement of unity since they do, in fact, share a technical relationship in that all the claims require one or more compound of formula I. This is not found persuasive because although each invention has the commonality of the compounds of formula I, Groups II-IV, require additional components to make the formulations. For example, invention II, which is a fragrance requires component (a) a fragrance in an amount that has a sensory effect and (b) one or more compounds of formula I, likewise, inventions III and IV, require additional components, compounds for the care and/or cleansing of skin and/or hair and an effective amount of a UV filter, respectively, in addition to the compound of formula I. Whereas, invention I, requires a compound of formula I only. These all represent 4 different inventions. As noted in the restriction requirement, a claim to different inventions cannot be considered to a special technical feature.

Applicant's election of the species of formula I of R1 is hydrogen, R2 is hydrogen, R3 is methyl, R4 is hydrogen, and R5 is hydrogen, styrylresorcinol, is acknowledged.

The restriction requirement is still deemed proper and is therefore made FINAL.

Claims 3-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group there being no allowable generic or

linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 11, 2010.

Claims 1-6 are pending in the application. Claims 3-5 are withdrawn from consideration. Claims 1-2 and 6 will presently be examined to the extent they read on the elected subject matter of record.

Priority

Priority to PCT/EP04/50896 filed on May 24, 2004, which claims priority to German Foreign Application No. 103 24 566.9 filed on May 30, 2003 is acknowledged.

Information Disclosure Statement

Receipt of Information Disclosure Statements filed on November 29, 2005 and August 17, 2009 is acknowledged.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The wording of Applicant's claim is confusing. Applicant is claiming a preparation; however, it is unclear what Applicant is preparing and how applicant is preparing the preparation. Applicant's claim states "Preparing an agent....by adding thereto a compound of the Formula I". It is unclear if applicant is intending to add the compound of the Formula I to an additional component or to a substrate, hence,

"thereto" or if Applicant is preparing the compound of Formula I to be used for a specific purpose. Applicant should clarify the intent of the claim.

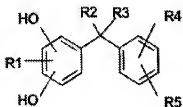
Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 and 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 12 of copending Application No. 12/159,886 ('886). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a tyrosinase inhibitor comprising a compound of formula (1)

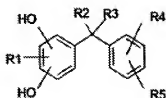


1

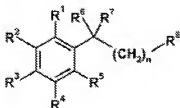
Claim 2 of the instant application and copending application '886 indicate that the compound of formula 1 is styrylresorcinol. The instant application does not indicate the addition of an oily phase in the formulation. However, Applicant is using open terminology (the term comprising) which allows any substance or acceptable excipient or diluent to be added to the composition. Therefore, it would have been obvious to the skilled artisan to add an oily phase to the tyrosinase inhibitor of the instant application as this is a known practice in the cosmetic, food, and pharmaceutical arts. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 and 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 17 and 19 of copending Application No. 12/159,866 ('866). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a composition comprising a tyrosinase inhibiting amount one or more



compounds of formula 1 1 of the instant application and



compounds of formula (I) (I) of co-pending application '866.

Claim 2 of the instant application and claims 4 and 5 of co-pending application '866 indicate the compound of formula (I) is styrylresorcinol. The instant application does not indicate the addition of component b), one or more compounds of formula (II). However, Applicant is using open terminology (the term comprising) which allows any substance, including other active compounds to be added to the composition. Therefore, it would have been obvious to the skilled artisan to add an additional active compound to the tyrosinase inhibitor of the instant application as this is a known practice in the cosmetic and pharmaceutical arts to improve and/or enhance the activity of the active compounds. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 12/159,951 ('951). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications are directed to a preparation comprising a tyrosinase inhibiting amount of styrylresorcinol. Independent claim 1 of the instant application does not specifically disclose the tyrosinase inhibitor is styrylresorcinol, however, claim 2 of the instant application indicates that the compound of formula 1 is styrylresorcinol. The instant application does not indicate the addition of component b), a skin-and/or hair lightening and/or senile keratosis-reducing amount of one or more compounds selected from the group consisting of chelating agents, phenolic derivatives, and/or organic acid derivatives. However, Applicant is using open terminology (the term comprising) which allows any substance, including other active compounds to be added to the composition. Therefore, it would have been obvious to the skilled artisan to add an additional active compound to the tyrosinase inhibitor of the instant application as this is a known practice in the cosmetic and pharmaceutical art to improve and/or enhance the activity of the active compounds. For these reasons, one of ordinary skill in the art would conclude that the invention defined in the instant claims would have been an obvious variation of the invention defined in the claims of the cited copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by the Yamamura et al. Publication (1995) as evidenced by Collington (WO 00/56279).

Yamamura et al. disclose the antioxidant activities of the dihydric phenols, such as catechol, resorcinol, and hydroquinone, containing alkyl and benzyl groups as substrates (page 2955, col. 2, first full paragraph). Yamamura et al. disclose



- 3. R₁=R₂=H
- 4. R₁=Me, R₂=H
- 5. R₁=Et, R₂=H
- 6. R₁=n-Bu, R₂=H
- 7. R₁=Ph, R₂=H
- 8. R₁=n-Bu, R₂=Me
- 9. R₁=n-Bu, R₂=Et
- 10. R₁=n-Bu, R₂=i-Bu
- 11. R₁=n-Bu, R₂=H
- 12. R₁=n-Bu, R₂=Me
- 13. R₁=n-Bu, R₂=Et

compounds 6

and 17



- 14. R₁=R₂=H
- 15. R₁=Me, R₂=H
- 16. R₁=Et, R₂=H
- 17. R₁=n-Bu, R₂=H
- 18. R₁=n-Bu, R₂=Me

, which read on applicant's

elect invention wherein, R₂ is hydrogen and R₃ is methyl. The -OH substituents can be located at any position on the benzene ring. In reference to the intended use of the compounds of formula I for skin lightening in human skin, hair lightening in humans, combating age spots in human skin, or inhibiting browning in foods, it is duly noted that the compounds of the prior art are the same as Applicant's compounds. Thus, the skilled artisan would recognize that a compound is inseparable from its properties. Hence, all the properties associated with Applicant's compounds, skin lightening in

humans, hair lightening in humans, combating age spots in human skin or inhibiting browning in foods would also be possessed by the compounds of the prior art. In addition, as evidenced by the disclosure Collington, (WO 00/56279), resorcinol derivatives, tyrosinase inhibitors, which have the same dihydroxyphenyl core are used for lightening skin or reducing the pigmentation of skin in a human (page 3, lines 1-26).

Yamamura et al. meet all the limitations of the claims and thereby anticipate the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 and 6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kondo et al. (JP 11-255,637) in view of Yamamura et al. Publication (1995).

Computer translation of JP 11-255,637 is used for translation purposes of the reference listed on the IDS filed August 17, 2009.

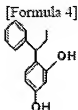
Applicant's Invention

Applicant claims a tyrosinase inhibitor comprising a compound of the Formula I. Applicant claims a tyrosinase inhibitor comprising styrylresorcinol. Applicant claims the tyrosinase inhibitor is used in an effective amount for lightening human skin and/or hair, combating age spots in human skin, and/or inhibiting browning in foods.

***Determination of the scope of the content of the prior art
(MPEP 2141.01)***

Kondo et al. teach cosmetics using tyrosinase activity inhibitor are available as active principles, used as a prevention of silverfish of the skin, a freckle and whitening cosmetics (page 1, paragraph 1, translation). Kondo et al. teach the purpose of the invention controls strongly the tyrosinase activity which participates in melanin generation, and that the tyrosinase activity inhibitor can be used for skin-whitening cosmetics (page 1, paragraph 3, translation). Kondo et al. teach that the tyrosinase activity inhibitor contains one of the flavonoids shown in formulas (1)-(9). Kondo et al. teach that in formulas (1)-(9) R can be the same or is different and can be chosen from an alkyl group of the carbon numbers 1-9 and n shows the integer of 0-3. Kondo et al. teach that since these substituents are substituents within the limits of R of there are the cases (n=0) where R is not included. Kondo et al. teach that they show the similarly outstanding tyrosinase activity inhibition ability. Kondo et al. teach that the concrete flavonoids which can be used can be easily designed and compounded within the limits

of R by a publicly known method (page 3, paragraph 9, translation). Kondo et al. teach that the cosmetics can contain said tyrosinase activity inhibitor as an essential ingredient and can show the melanin generation depressant action based on tyrosinase activity inhibitory action and can be used to make whitening cosmetics (page 4, paragraph 12). Kondo et al. teach in example 1 the compound of formula (1) was prepared with working example 1 by conventional method and the sample the



flavonoids shown with the formula (4)

was made (page 5, paragraphs

19-20, translation).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

Kondo et al. do not explicitly disclose the tyrosinase inhibitor comprising styrylresorcinol. It is for this reason the Yamamura et al. Publication is added as a secondary reference.

The teachings of the Yamamura et al. Publication with respect to the 35 U.S.C. 103(a) rejection is hereby incorporated and are therefore applied in the instant rejection as discussed above.

***Finding of prima facie obviousness
Rationale and Motivation (MPEP 2142-2143)***

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kondo et al. and the Yamamura et al. Publication

and use styrylresorcinol as the tyrosinase inhibitor. Kondo et al. teach that compounds of formulas (1)-(9) strongly control the tyrosinase activity which participates in melanin generation, and therein provides a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics. One skilled in the art at the time the invention was made would have been motivated to modify the teaching of Kondo et al. and use styrylresorcinol, in which R3 is methyl, as the tyrosinase inhibitor to lighten human skin. In view of the close structural similarity between the claimed compounds, as evidenced by the teachings of Yamamura et al., and compound 4 taught by Kondo et al., and the fact that the latter is taught to be a tyrosinase activity inhibitor which can be used for skin-whitening cosmetics, one of ordinary skill in the art would have been motivated to make the claimed compounds in the expectation that it too would serve as a skin-whitening cosmetics. The compound of formula (1) of the instant application and the compound of formula 4 taught by Kondo et al. are related as homologs. Hence, the Examiner has established that the use of styrylresorcinol as the tyrosinase inhibitor to lightening human skin is prima facie obvious over Kondo et al. because adjacent homologs are prima facie obvious. In re Henze, 85 USPQ 261 (C.C.P.A. 1950) and In re Wood, Whittaker, Stirling, and Ohta, 199 USPQ 137 (C.C.P.A 1978).

Therefore, the claimed invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made because every element of the invention has been fairly suggested by the cited references.

None of the claims are allowed.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andriae M. Holt whose telephone number is 571-272-9328. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Andriae M. Holt
Patent Examiner
Art Unit 1616

/John Pak/
Primary Examiner, Art Unit 1616